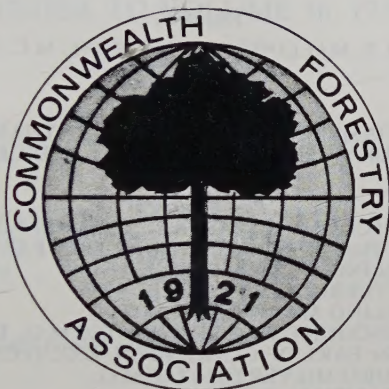


The
Commonwealth Forestry Review



Vol. 56, 1977

PUBLISHED BY
THE COMMONWEALTH FORESTRY ASSOCIATION
11 KEBLE ROAD, OXFORD OX1 3QG

Price to Non-Members £12 net

Per
SDI
E573

THE COMMONWEALTH FORESTRY ASSOCIATION

Incorporated by Royal Charter November 1921, and by Supplemental Royal Charter, 1962
at
11 KEBLE ROAD, OXFORD OX1 3QG
Telephone: 50156

Patron:

HER MAJESTY THE QUEEN

President:

SIR S. S. MALLINSON, C.B.E., D.S.O., M.C., D.L.

Vice-Presidents:

SIR HARRY CHAMPION, C.I.E. E. BRYAN LATHAM, C.B.E., M.M.
SIR ARTHUR GOSLING, K.B.E., C.B. J. A. DICKSON, C.B.

Past Chairmen:

1921-22 The Rt. Hon. VISCOUNT NOVAR, K.T., G.C.M.G., P.C.
1923-24 Colonel The Rt. Hon. LORD COURTHOPE, M.C., P.C.
1924-27 Sir JOHN STIRLING MAXWELL, Bt., K.T.
1927-32 Sir P. H. CLUTTERBUCK, C.I.E., C.B.E., V.D.
1933-34 Sir JOHN STIRLING MAXWELL, Bt., K.T.
1934-37 The Rt. Hon. VISCOUNT STONEHAVEN, G.C.M.G., D.S.O., P.C.
1938-54 The Rt. Hon. The EARL OF CLARENDON, K.G., G.C.M.G., G.C.V.O., P.C.
1954-59 The Rt. Hon. LORD MILVERTON, G.C.M.G.
1959-61 Sir HARRY CHAMPION, C.I.E.
1961-64 E. BRYAN LATHAM, C.B.E., M.M.
1964-72 Sir ARTHUR GOSLING, K.B.E., C.B.
1972-74 J. A. DICKSON, C.B.

Chairman: J. WYATT-SMITH, M.A., B.Sc. *Vice-Chairman:* D. R. JOHNSTON
Hon. Treasurer: P. J. WOOD

Governing Council:

P. G. ADLARD (Britain)	E. BRYAN LATHAM, C.B.E., M.M. (Britain)
A. E. AITKINS, O.B.E. (Britain)	C. G. A. LATHAM (Britain)
J. D. BRAZIER (Britain)	Sir S. S. MALLINSON, C.B.E., D.S.O., M.C., D.L. (Britain)
Sir HARRY CHAMPION, C.I.E. (Britain)	T. S. MALLINSON (Britain)
M. J. CONWAY (New Zealand)	K. MARTEN (Solomon Is.)
Dr. D. A. N. CROMER (Australia)	O. M. MBURU (Kenya)
S. DARDAINE (Trinidad)	J. SCOTT McBRIDE (Britain)
Dr. H. C. DAWKINS, M.B.E. (Britain)	D. L. McNEIL (Britain)
J. A. DICKSON, C.B. (Britain)	Dr. F. R. MOULDS (Australia)
J. H. FRANÇOIS (Ghana)	A. M. OSENI (Nigeria)
O. FUGALLI (FAO)	Dr. D. R. REDMOND, D.F.C. (Canada)
Dr. M. GANE (Britain)	S. D. RICHARDSON (New Zealand)
Sir A. H. GOSLING, K.B.E., C.B. (Britain)	M. L. S. B. RUKUBA (Uganda)
R. E. GROVES, C.B.E. (Britain)	R. G. SANGSTER, C.B.E. (Britain)
A. HAMID (Bangladesh)	C. D. SCHULTZ (Canada)
J. O. HEMMINGSEN (Canada)	DUNCAN STEVENSON, O.B.E. (Britain)
G. D. HOLMES (Britain)	E. J. WARD (Canada)
D. R. JOHNSTON (Britain)	G. WEBSTER, O.B.E. (Britain)
P. R. O. KIO (Nigeria)	P. J. WOOD (Britain)
K. L. LAHIRI (India)	J. WYATT-SMITH (Britain)
A. F. A. LAMB, O.B.E. (Britain)	

EDITORIAL COMMITTEE

P. G. ADLARD (*Commonwealth Forestry Institute*)

J. D. BRAZIER, B.Sc. (*Princes Risborough Laboratory*)

Dr. H. C. DAWKINS, M.B.E., M.A. (*Commonwealth Forestry Institute*)

P. J. WOOD, M.A. (*Commonwealth Forestry Institute*)

C. J. W. PITT, B.Sc., M.A. (*Editor and Secretary*)

COMMONWEALTH FORESTRY REVIEW

INDEX TO VOLUME 56, 1977

AROUND THE WORLD

	Page
Australia	
<i>Australian Forestry</i>	207
Institute of Foresters of Australia	13
National University M.Sc. course	274
Solar kiln timber drying	274
Bangladesh	
Forestry development and training centre	13
Institute of Forestry	13
Other staff changes	14
Belize	
Schlich Memorial Award 1977	276
Brazil	
Pulpmill in the Amazon	276
Canada	
Analysing the landscape	14
Canadian Institute of Forestry – Working Groups	14
Dominica	
Forestry development	277
East Africa	
Tree breeding – selection for resistance to canker disease	103
Gabon	
African Timber Organization	104
General	
FAO: Forest genetic resources	207
FAO/IUFRO Forest tree breeding	208
FAO, Rome – The management and utilization of the tropical moist forest	277
MAB/IUFRO Tropical rainforest ecosystem workshop	210
New thinking about forestry and forest industries emerges from series of FAO meetings	104
Seminar on "The behaviour of wood products in fire"	278

	Page
Ghana	
<i>Ghana Forestry Journal</i>	211
Diploma/Certificate course, Kumasi	211
Hong Kong	
Reorganization of the Conservation and Forestry Division	107
Indonesia	
Eighth World Forestry Congress 1978	16, 213
Kenya	
Hunting banned	279
Liberia	
Hardwood venture	107
Nigeria	
Particle board mill at Sapele	108
Norway	
XVI IUFRO World Congress, Oslo, 1976	16
Papua New Guinea	
Forest Industry College	22
Retirement of Principal, Forestry College	21
University of Technology, Lae – Forestry Department	109
Peru	
Pacific International Trade Fair 1978	280
Sabah	
Forestry Development Authority (SAFODA)	215
Sweden	
Forest companies build chip mill utilizing stumps	22
Tanzania	
Faculty of Agriculture, Forestry and Veterinary Science	23
Uganda	
Utilization of tropical high forest	216
United Kingdom	
Building Research Establishment Publications	218
Chainsaws	283
Changes in grant-aid in forestry	282
Dame Sylvia Crowe, D.B.E.	24
Department of Forestry, CFI, Oxford	110
Directors General, old and new	23
Dutch Elm Disease – Results of the 1976 survey	28
Film "Woodland Forest"	29
Good quality elm now in short supply	110
IUFRO Meeting at TRADA	280
Laser cutting	111
Lecturer in Wood Science at Bangor	281
Man's influence on weather and climate	25
New Director, Royal Botanic Gardens, Kew	24
New services from the CF Bureau	281
Research course, CFI	218

Royal Bath & West Show	219
Rural Technology, Tropical Products Institute	217
Second Planning and Management Course, Oxford	26
Strength of buried wood	282
'Teak' finish	111
2, 4, 5-T - Reassurance about the use of this herbicide	27

United States

American Forestry Association, and <i>American Forests</i>	30
Costs of environmental constraints	111
Petrified wood	284

ARTICLES - Titles

Arbor-Vitae or Reconciling long-term benefits of forestry with short-term national objectives, by Evans, Julian	33
British Columbia's exports of pulp and paper products to the European Economic Community, by Enabor, E.E. and Roberts, D.H.	145
Double sampling and pilot survey: a note on terminology, by Ayhan, H.O., Vardy, A. and Hetherington, J.C.	61
Dynamics of forest law, by Lorrain-Smith, Roy	39
Establishment of <i>Eucalyptus tereticornis</i> on tailings from the Bougainville copper mine, by Hartley, Alan	239
Forestry in Brazil - Amazonia, by Palmer, J.R.	115
Forestry and the community, by Roche, Laurence	299
Herbarium specimens can be photocopied, by Wood, P.J.	65
Implication of changing income for wood consumption in Nigeria, by Nweke, Felix I.	155
Initial responses to fertilizing <i>Eucalyptus grandis</i> are sustained until harvesting, by Schonau, A.P.G.	57
Introduction of quarantine to state forests of Western Australia, by Hart, A.J.	63
Oddballs and amateurs, by Hinds, H.V.	287
Preliminary investigations of the pests of exotic forest-trees in Zambia, by Ivory, M.H.	47
Reconciling long-term benefits from forestry with short-term national objectives: Recognizing changing values, by Gregory, J.G.	131
Reconciling long-term benefits from forestry with short-term national objectives, by Ryle, George	139
Restoring fertility in West Australian nursery beds, by Hart, A.J.	293
Utilization of low-quality timber, by King, K.F.S.	223

Authors

AYHAN, H.O., VARDY, A. and HETHERINGTON, J.C., Double sampling and pilot survey: a note on terminology	61
ENABOR, E.E. and ROBERTS, D.H., British Columbia's exports of pulp and paper products to the European Economic Community	145
EVANS, Julian, Arbor-Vitae or Reconciling long-term benefits of forestry with short-term national objectives	33
GREGORY, J.G., Reconciling long-term benefits from forestry with short-term national objectives: Recognizing changing values	131
HART, A.J., Introduction of quarantine to state forests of Western Australia	63
HART, A.J., Restoring fertility in West Australian nursery beds	293
HARTLEY, Alan, Establishment of <i>Eucalyptus tereticornis</i> on tailings from the Bougainville copper mine	239
HETHERINGTON, J.C., AYHAN, H.O. and VARDY, A., Double sampling and pilot survey: a note on terminology	61
HINDS, H.V., Oddballs and amateurs	287
IVORY, M.H., Preliminary investigation of the pests of exotic forest-trees in Zambia	47
KING, K.F.S., Utilization of low-quality timber	223
LORRAIN-SMITH, Roy, Dynamics of forest law	39
NWEKE, Felix I., Implication of changing income for wood consumption in Nigeria	155

PALMER, J.R., Forestry in Brazil – Amazonia	115
ROBERTS, D.H. and ENABOR, E.E., British Columbia's exports of pulp and paper products to the European Economic Community	145
ROCHE, Laurence, Forestry and the community	299
RYLE, George, Reconciling long-term benefits from forestry with short-term national objectives	139
SCHONAU, A.P.G., Initial responses to fertilizing <i>Eucalyptus grandis</i> are sustained until harvesting	57
VARDY, A., AYHAN, H.O. and HETHERINGTON, J.C., Double sampling and pilot survey: a note on terminology	61
WOOD, P.J., Herbarium specimens can be photocopied	65

Countries

Australia	63, 293
Brazil	115
Canada	145
Nigeria	155
Papua New Guinea	239
South Africa	57
Zambia	47

Species

<i>Eucalyptus camaldulensis</i>	71
<i>Euc. globulus</i>	325
<i>Euc. grandis</i>	57, 330
<i>Euc. regnans</i>	326
<i>Euc. tereticornis</i>	239
<i>Pinus oocarpa</i>	259
<i>Triplochiton scleroxylon</i>	249

CORRESPONDENCE	11, 98, 203, 273
----------------	------------------

EDITORIALS	1, 93, 195, 267
------------	-----------------

NEW MEMBERS	10, 97, 201, 272
-------------	------------------

NEWS OF MEMBERS	9, 96, 199, 271
-----------------	-----------------

OBITUARIES

Clements, J.N., O.B.E.	5
Edlin, H.	94
Hamilton, A.P.F., M.C., C.I.E., O.B.E.	95, 198
Keet, J.D.M.	7
Sardar Tara Singh	9

REVIEWS AND NOTES – Books and Publications

Atlas of insects harmful to forest trees	251
Bibliography on teak	171
Canadian Forestry	167
Can desert encroachment be stopped?	167
Economics of national forest management	164
Environment: a dictionary of the world around us	70
<i>Eucalyptus camaldulensis</i> : Trop. For. Pap. No. 8, an annotated bibliography of genetic variation	71
European timber trends and prospects 1950 to 2000	248
Evaluation of mixed tropical hardwoods for pulp and paper manufacture	168
Forest pathology: principles and practice in forestry	169

Forest Service (USA)	166
Introduction to the botany of major crop plants	320
Irrigation potential of the soils along the main rivers of Eastern Botswana – a reconnaissance assessment, LRS No. 7	72
Land resources of the Northern and Luapula Provinces, Zambia – a reconnaissance assessment, LRS No. 19, Vols. 4 and 5	73
Land resources of the Northern and Luapula Provinces, Zambia, LRS No. 19, Vol. 6	253
Logging practices	318
Man and the boreal forest	72
Man, land and the forest environment	247
Manual on species and provenance research with particular reference to the tropics, Trop. For. Pap. No. 10.	71
Natural durability and preservation of one hundred tropical African woods	319
Natural history of trees	69
Organization of forest cooperatives	69
Rangeland management and ecology	247
Some common trees of the New Hebrides and their vernacular names	172
Special appendices to a manual on species and provenance research with particular reference to the tropics, Trop. For. Pap. No. 10A	320
Story of pines	252
Symposium on variation and breeding systems of <i>Triplochiton sceroxylon</i>	249
Tree physiology and yield improvement	163
Tree rings and climate	164
Utilization – Terminology – Ind. For. Rec. V(1), Pt. II	171
What wood is that?	321
Welsh timber trees	319

Review Notes

British forestry mission, Nicaragua, species and provenance trials	255
British Wood Preserving Association, 1976 Convention	254
Chemical control of weeds in the forest	74
Communities and ecosystems	253
Conifer bark: its properties and uses	175
Control of heather	258
Ecological studies – analysis and synthesis:	326
Analysis of temperate forest ecosystems	327
Tropical ecological systems	327
Genetics of forest ecosystems	327
Remote sensing for environmental sciences	328
Flora and fauna of radiata pine plantations of North-Eastern Victoria	173
Flora of tropical East Africa: Campanulaceae, Plumbaginaceae	77
Flora of Virgin Gorda	326
Forest road planning	255
Free growth of oak	253
Genetic resources of Victorian eucalypts	76
Guide to artificial regeneration with particular reference to line planting in Peninsular Malaysia	259, 323
Guidelines to forest weed control	258
Institute of Tropical Forestry, Rio Piedras, Puerto Rico	324
Jarrah dieback – soil temperature and moisture regimes	325
Marketing of tropical wood – wood species from African tropical moist forests	78
Nitrogen, phosphorus and sulphur – global cycles	75
Nutrition of <i>Eucalyptus globulus</i> at Powelltown	325
Point-to-point method for regeneration surveys	325
Preparation of plant material for estimating a wide range of elements	172
Prospects for irrigation development round Lake Zwai, Ethiopia	175
Radiata pine nursery research in North-Eastern Victoria	174
Review of the ecological effects of herbicide usage in forestry	74

Seed orchards	76
Silviculture in the hill forests of the Malay Peninsula	259, 322
Site-vegetation mapping in the Northern Jarrah Forest	324
<i>Skyline</i>	326
Solomon Islands timbers, major species	174
Statforms: pro-formas for the guidance of statistical calculations	77
Trees of the Caribbean National Forest, Puerto Rico	326
Variation of growth rate between <i>Eucalyptus regnans</i> trees from four seed sources	326
Volume functions for trees of all sizes	325
Wood-based panels	79

Research Notes

Articles on Mycorrhiza	176
Climatic control on 'fused needle' in <i>Pinus oocarpa</i>	259
Drying of British wood	329
Heartwood and sapwood	329
Marketing of forest tree seed and plants in the EEC	328
Metric site index curves for <i>Eucalyptus grandis</i>	330
Painting timber in adverse weather	330
Research papers - Federal Department of Forest Research, Ibadan	330
Sector sawing	329

Annual Reports

Australia - New South Wales, 1975-76	262
Queensland, 1975-76	182
South Australia, 1974-75	182
South Australia, 1975-76	333
Victoria, Research activity, 1975	183
Victoria Forests Commission, 1975-76	88
Western Australia, 1975-76	184
Canada - Canadian Forestry Service, 1975-76	262
New Brunswick, 1976	185
Ontario, Forest Research Branch, 1975	82
Prince Edward Island, 1975	82
Saskatchewan, 1975-76	185
Mauritius, 1972, 1973 and 1974	186
New Zealand - Forest Research Institute, 1975	187
Forest Service, 1975 and 1976	79
Northern Ireland, 1975-76	187
St. Helena, Island of, 1976-77	263
Sarawak, 1975	188
Solomon Islands, 1976	189
South Africa, Wattle Research Institute, 1975-76	190
Sri Lanka, 1973, 1974 and 1975	83
UK: Economic survey of private forestry income and expenditure in Scotland 1961-1974	86
UK: Economic survey of private forestry establishment costs, England and Wales, forest year 1974	87
UK: Economic survey of private forestry costs of operations in Scotland, forest year 1974	87
UK: Employment in private forestry in Scotland during 1974, part 1, direct employment	264
UK: Employment and earnings of weekly-paid staff in England and Wales, 1974-76	265
UK: Employment in private forestry in Britain during 1974	265
UK: Forestry Commission, forest research for the year ended March 1976	333
UK: Forestry Commission, 1975-76	334
UK: Institute of Terrestrial Ecology, 1975	263